D.6 Environmental Contamination and Hazardous Materials

This section addresses the environmental setting and impacts related to the construction and operation of the Proposed Project and alternatives involving the issues of environmental contamination and hazardous materials. Specifically, Section D.6.1 provides a description of the environmental baseline. The regulatory setting is described in Section D.6.2, followed by the environmental impacts analysis of the Proposed Project in Section D.6.3. Impact analysis for the alternatives is provided in Sections D.6.4 and D.6.5. Section D.6.6 presents the mitigation monitoring program.

D.6.1 Environmental Baseline

Sites with known or suspected contamination along or near the proposed pipeline route were identified to better define the areas where hazardous waste–contaminated sites may impact construction activities. The primary reason to define potentially hazardous sites is to protect worker health and safety and to minimize public exposure to hazardous materials during construction and waste handling. Where encountered, contaminated soil may qualify as hazardous waste, thus requiring handling and disposal according to local, State, and federal regulations.

D.6.1.1 Regional Overview

Existing and past land use activities are used as potential indicators of hazardous material storage and use. For example, many industrial sites, historic and current, are known to have soil or groundwater contamination by hazardous substances. Properties devoted to oil or chemical distribution and storage are also commonly known to have environmental contamination from petroleum hydrocarbons, heavy metals, and chlorinated solvents. Other hazardous materials sources include leaking underground tanks in commercial and industrial areas, surface runoff from contaminated sites and migration of contaminated groundwater plumes to the pipeline route, and application of pesticides and herbicides on agricultural land. The proposed pipeline, from Concord to Sacramento and in the vicinity of the station connections, traverses land used for agriculture, grazing, oil storage, distribution and transmission, industrial activities, residential housing, and minor areas devoted to commercial uses and natural gas production.

D.6.1.2 Environmental Setting: Proposed Project

This section briefly summarizes existing land uses along the pipeline route because land use can define the likelihood that contamination will be present. In Section D.6.3.6, the existing contaminated sites with the potential to affect pipeline construction are described and categorized as to their severity.

Segment 1 (MP 0–6.1) – Contra Costa County and Carquinez Strait

Segment 1 of the proposed pipeline runs from the SFPP Concord Station to the north shore of the Carquinez Strait. Most of this pipeline segment would be installed within existing utility and road ROW. This pipeline segment begins within the SFPP Concord Station and exits the station to the west through the tank farm. This segment would follow utility corridors through primarily undeveloped marshland, behind a residential neighborhood, pass through and adjacent to petroleum distribution and storage

properties, and pass two landfill/waste transfer facilities. At Peyton Slough, the pipeline would cross the slough and pass into the Rhodia, Inc. facility, approximately following the alignment of Peyton Slough along the eastern edge of the property. North of Rhodia's existing "Settling Pond" the pipeline would enter State-owned (CSLC) property and would gradually turn westward along the coast to meet the existing 14-inch pipeline and cross the strait. On the north shore of the Carquinez Strait the proposed pipeline would continue north approximately 100 feet from the exiting 14-inch pipeline and then turn northeast paralleling the shore through open land.

Phase 1 Carquinez Strait Crossing

The Phase 1 Carquinez Strait crossing would entail using the existing 14-inch pipeline to cross the strait. On each side of the Carquinez Strait a new permanent pig launcher/receiver station will be constructed at the transition from 20-inch pipeline to 14-inch pipeline. The pig launcher/receiver stations would be fenced and the entire station area would be curbed for containment.

Phase 2 Carquinez Strait Crossing

The Phase 2 Carquinez Strait crossing would occur in 10 to 12 years and would entail installing a new 20-inch pipeline beneath the Carquinez Strait using a single horizontal directional drill (HDD). The proposed alignment for a HDD crossing of the strait would be located on the east side of the existing Peyton Slough alignment, primarily crossing undeveloped State-owned (CSLC) property. The HDD would emerge on the northern side of the strait approximately 800 feet east of where the exiting pipeline comes on shore in Benicia.

Segment 2 (MP 6.1–17.6) – Benicia and I-680 Frontage

In Benicia, Segment 2 would pass through industrial and warehouse districts, and a large storage lot for new automobiles. As the segment continues east from the City of Benicia into unincorporated Solano County, it parallels the frontage road along the west side of I-680 passing through undeveloped grazing areas with scattered rural residences. Approximately 2,600 feet south of Ramsey Road the pipeline segment would cross I-680 and parallel the freeway through Department of Fish and Game open area and native and cultivated vegetation east of the frontage road on the east side of I-680. The end of this segment would pass adjacent to agricultural land.

Segment 3 (MP 17.6–24.5) – Cordelia

The Cordelia Segment, Segment 3, would primarily cross or run adjacent to agricultural land being used for grain and row crops. The Cordelia Segment would also cross the Cordelia Marsh. Several rural residences and farms are also located in the area. Portions of this segment would run parallel to transmission and railroad (UPRR) ROWs. This segment would cross the railroad in several locations. The east end of the segment would pass through the edge of Suisun City near and industrial area.

Segment 4 (MP 24.5–30.7) – Fairfield/Suisun City

Segment 4 begins at Highway 12 and travels in a generally northeast direction through the Cities of Fairfield and Suisun City. The pipeline alignment is located primarily within or adjacent to roads and road ROWs. The pipeline alignment would pass through a combination of commercial, light industrial, residential, and minor open space areas. The commercial and light industrial areas are primarily located at the southwest end of the alignment in the City of Fairfield. The pipeline alignment would cross UPRR railroad alignments three times. In the Suisun City area the alignment would pass through

housing tracts, open area, and small agricultural fields located between and near residential neighborhoods. As the pipeline alignment crosses back into the City of Fairfield, land use changes to a mix of large industrial facilities and open space.

Segment 5 (MP 30.7–65.1) – Solano and Yolo Counties Agricultural Area

This segment is located entirely within agricultural areas of Solano and Yolo Counties. The pipeline route would be located within private ROWs along roads and through fields. Along this segment the pipeline would pass by agricultural fields, primarily grain crops, rural residences and farms, and an active landfill (B&W Sanitary Landfill) located at 6426 Hay Road, between MP 39 and 40. An approximately 12.5-mile piece of this segment, from 1.3 miles southwest of Hass Slough to approximately 1,200 feet northeast of Road 106, would run along the edge a former railroad ROW; the tracks were removed in the 1930s or 1940s. The route then would turn north and continue through agricultural fields along the edge of a PG&E transmission ROW for just over 5 miles. On the north side of I-80 the pipeline alignment would turn east and parallel the south side of a UPRR ROW through open area and fields. This alignment would pass through an area with numerous small active and abandoned natural gas fields.

Segment 6 (MP 65.1–69.9) – West Sacramento

Segment 6 begins just west of the East Yolo Bypass, crosses it, and then continues east to Enterprise Boulevard, traversing primarily wetlands and open area. After passing under I-80 the segment would be located primarily in road ROW and would pass through an area with a mix of light and heavy industrial properties, the northern edge of the Port of Sacramento, and along a Port access road parallel to the Sacramento River Deep Water Shipping Channel. Near the end of the Deep Water Channel the alignment would turn north onto South River Road which passes a sewage disposal plan, light and heavy industrial facilities, and petroleum refining and distribution facilities before ending at SFPP's West Sacramento Station.

Segment 7 – Wickland Connection

This segment would entail construction of a section of 12-inch pipeline to connect with a pipeline that would carry jet fuel to the Sacramento International Airport. The pipeline would be located just south of and parallel to the southern levee of the East Yolo Bypass. Properties to the south of and adjacent to the alignment are primarily industrial and commercial with some open space between facilities.

D.6.1.3 Environmental Setting: Existing Pipeline ROW Alternative

The beginning of the route for the Existing Pipeline ROW Alternative is very similar to Segment 1 of the Proposed Project, except that the pipeline would enter the Rhodia site and follow existing roads within the site to the point where it would join the existing 14-inch pipeline and cross the Carquinez Strait. From the north side of the Carquinez Strait the pipeline would follow a path similar to the Proposed Pipeline through the City of Benicia. East of the City of Benicia, the Existing Pipeline ROW Alternative would travel to the northwest along the UPRR ROW passing through large rural areas of Solano and Yolo Counties, and the Cities of Fairfield, Suisun City, Elmira, Dixon, and Davis. The alignment would continue to follow the UPRR ROW to the edge of West Sacramento. In West Sacramento the Existing Pipeline ROW Alternative would follow the same alignment as the Proposed Pipeline to the SFPP West Sacramento Station through a predominantly industrial area. As the Existing Pipeline ROW Alternative passes through the above mentioned cities, it would pass through industrial and commercial areas along the UPRR railroad tracks.

Mitigation Segment EP-1

Mitigation Segment EP-1, suggested to reduce impacts to wetlands, would primarily follow the same alignment as the Proposed Pipeline from approximately MP 12.4 to 23.7, along the Proposed Project alignment and would have the same environmental setting. At approximately MP 23.7, Mitigation Segment EP-1 would continue east along Cordelia Road, into the City of Suisun City, and would cross the UPRR tracks were it would rejoin the Existing Pipeline ROW Alternative route.

Mitigation Segment EP-2

Mitigation Segment EP-2 was suggested to reduce land use impacts in the City of Davis. It would bypass Davis by turning east onto Tremont Road and then north onto Mace Boulevard. The segment would be located entirely within road ROWs. The area along this mitigation segment is primarily agricultural and undeveloped open space. This segment would rejoin the Existing Pipeline ROW Alternative northeast of the City of Davis, where Mace Boulevard intersects the UPRR ROW.

D.6.1.4 Environmental Setting: No Project Alternative

The No Project Alternative would primarily entail continuing to use the existing pipeline and other SFPP pipelines. Trucks and trains could also be used to ship petroleum products. Environmental conditions and setting for the No Project Alternative would be the same as those listed above in Section D.6.1.3 for the Existing Pipeline ROW Alternative (without the Cordelia and Davis mitigation segments). The second existing SFPP pipeline to the Sacramento area, SFPP's LS 9 pipeline, passes through urban and rural areas with comparable land uses described for the Existing Pipeline ROW Alternative.

D.6.2 Applicable Regulations, Plans, and Standards

Hazardous substances are defined by State and federal regulations to protect public health and the environment. Hazardous materials have certain chemical, physical or infectious properties that cause them to be considered hazardous. Hazardous substances are defined in the Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 101(14), and also in the California Code of Regulations (CCR), Title 22, Chapter 11, Article 2, Section 66261, which provides the following definition:

> A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

For this analysis, soil that is excavated from a site containing hazardous materials would be considered to be a hazardous waste if it exceeded specific CCR Title 22 criteria. Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials is performed; it may also be required if certain other activities are proposed. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

D.6.2.1 Federal

The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. Environmental Protection Agency (EPA) for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste.

RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by HSWA.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List (NPL) on which contaminated sites are listed. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

D.6.2.2 State

The California Hazardous Waste Control Law (HWCL) is administered by the California Environmental Protection Agency (CALEPA) to regulate hazardous wastes. While the HWCL is generally more stringent than RCRA, until the EPA approves the California program, both the State and federal laws apply in California.

The HWCL lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills. The HWCL lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

According to Title 22 (Chapter 11 Article 3, CCR), substances having a characteristic of toxicity, ignitability, corrosivity or reactivity are considered hazardous. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, contaminated or is being stored prior to proper disposal.

Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability, or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances are hazardous because of their flammable properties. Gasoline, hexane, and natural gas are examples of ignitable substances. Corrosive substances are chemically active and can damage other materials or cause severe burns upon contact. Examples include strong acids and bases such as sulfuric (battery) acid or lye. Reactive substances may cause explosions or generate gases or fumes. Explosives, pressurized canisters, and pure sodium metal (which reacts violently with water) are examples of reactive materials.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing radiation to

increase their stability. Radioactive waste mixed with chemical hazardous wastes is referred to as "mixed wastes." Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents, such as bacteria or viruses.

Soil that is excavated from a site containing hazardous materials would be a hazardous waste if it exceeded specific CCR Title 22 criteria. Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials is performed; it may also be required if certain other activities are proposed. Even if soil or groundwater at a contaminated site does not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

Hazardous Material Worker Safety

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

D.6.2.3 Regional and Local

Contra Costa County

The Contra Costa Health Services Department, Environmental Health Division, is the designated administering agency in Contra Costa County responsible for administering and enforcing the provisions of Health and Safety Code Chapter 6.95 and Division 450 related to Hazardous Materials and Wastes. The County code covers hazardous material release response plans, inventories, generators, underground storage tanks, and risk management.

Solano County

The Solano County Department of Environmental Management, Environmental Health Services Division, is responsible for County Hazardous Materials Program that regulates the use, storage, and disposal of hazardous materials. The Division issues permits and inspects facilities handles or stores hazardous materials or waste. County staff inspects businesses that treat hazardous waste pursuant to permit by rule, conditional authorization, or conditional exemption, for compliance with the Hazardous Waste Control Act, and responds to complaints of illegal disposal of hazardous waste. The Environmental Health Services Division conducts the permitting and inspection of underground tanks that store hazardous materials.

Yolo County

Yolo County oversees and enforces industrial waste disposal pursuant to County Code Title 6 (Sanitation and Health), and Chapter 7 (Litter and Contaminants). Water quality objectives, criteria, and procedures for the regulation of domestic water supplies, wells, and liquid waste discharges are established in Chapter 8 of County Code Title 6.

D.6.3 Environmental Impacts and Mitigation Measures for the Proposed Project

D.6.3.1 Introduction

The principal environmental impacts involving hazardous waste are the excavation and handling of contaminated soil resulting in exposure of workers and the general public. A wide variety of contaminants including petroleum hydrocarbons, solvents, polynuclear aromatic compounds, heavy metals, and herbicides may be present along the pipeline route. Contaminant types, concentrations, and location cannot be accurately predicted without site specific information. Hazardous materials in the construction area may require special handling as hazardous waste and create an exposure risk to workers and the general public during excavation and transport. Contaminated soil exceeding regulatory limits for trench backfilling will require on-site treatment or transport to off-site processing facilities; contaminated soil removed from the construction area must be transported according to State and federal regulations and be replaced by import soil approved for backfilling. Similar issues pertain to contaminated groundwater which may actually transport contamination from nearby sources to the Proposed Project alignment. Shallow groundwater and locally contaminated groundwater is anticipated at proposed excavation depth throughout many areas of the proposed route and alternative segments.

D.6.3.2 Definition and Use of Significance Criteria

An impact would be considered significant and require additional mitigation if project construction or operation would:

- Be expected to result in soil contamination, including flammable or toxic gases, at levels exceeding federal, State, and local hazardous waste limits established by 40 CFR Part 261 and Title 22 CCR 66261.21, 66261.22, 66261.23, and 66261.24;
- Result in mobilization of contaminants currently existing in the soil, creating potential pathways of exposure to humans or wildlife that would result in exposure to contaminants at levels that would be expected to be harmful; or
- Result in the presence of contaminated soils or groundwater within the project area, and as a result, expose workers and/or the public to contaminated or hazardous materials during pipeline construction activities, at levels in excess of those permitted by California Occupational Safety and Health Agency (CAL-OSHA) in CCR Title B and the Federal Occupational Safety and Health Administration (OSHA) in Title 29 CFR Part 1910.

D.6.3.3 Impacts of Pipeline Construction

Based on the criteria identified in Section D.6.3.2, environmental reports prepared for SFPP by URS for the project *(Concord to Sacramento Pipeline Project Environmental Contamination Assessment, April 2002,* and *Concord to Sacramento Pipeline Project – Wickland Lateral, October 2002)* and the associated environmental databases were reviewed to identify sites with potential to contaminate the construction area. Sites are ranked according to high, medium, and low potential to significantly impact the project by causing hazardous waste in the pipeline route. The types of impacts identified in this section are as follows:

- Potential health hazards to construction workers and the public caused by contaminated sites along the construction ROW.
- Landfills near the construction ROW representing a potential impact to the project from methane or other flammable or toxic gases.

- Potential for physical or health hazards to construction workers and the public associated with construction through natural gas fields.
- Potential hazard to the public during transport of hazardous materials and potential increased demand for landfill space.

Impact EC-1: Contaminated Sites Along the ROW

Pipeline construction through contaminated sites could cause health hazards to construction workers and the public. (Potentially Significant, Class II)

Impact Discussion

Transport of contaminants to the pipeline route from high and medium potential sites[1] would result in impacts that are potentially significant (Class II) but mitigable to less than significant levels. Sites with low contamination potential are considered to have adverse but not significant (Class III) impacts, and are not further discussed in this document.

Active hazardous waste sites physically separated from the pipeline route by roads or other facilities would have a low potential to cause hazardous substances along the pipeline route. These physical barriers provide a buffer that would restrict surface migration of contaminants from the source and inhibit unauthorized waste disposal along the pipeline route. Subsurface migration of contaminants within the unsaturated soil zone is predominantly vertical downward and is not likely to reach the pipeline route from buffered sites.

Subsurface migration of mobile contaminants within groundwater may provide a conduit to the project area. Shallow groundwater will likely be encountered at bored water crossings and near waterbodies such as straits, rivers, unlined canals, drainage ditches, and ponds. In areas where the water table is below the planned excavation depth of the proposed and alternative routes, contaminated groundwater is not expected to impact construction.

In addition to the specific sites identified in the environmental databases (URS, 2002d), it is possible that other sites could be discovered during construction of the proposed pipeline. Soil contamination may be encountered during trench excavation in places where no recorded sites are currently designated or identified. Offsite migration of contamination, unauthorized dumping, or historic, unreported hazardous materials spills may adversely impact the soil throughout much of the industrial land use areas.

Mitigation Measures for Impact EC-1: Contaminated Sites Along the ROW

Implementation of the following three mitigation measures would provide an assessment of actual or potential site contamination, resulting in the development of appropriate safeguards and methods to reduce potential risk prior to construction. The mitigation measures presented below must be accomplished prior to construction to allow development of appropriate worker protection and waste management plans that discuss proper handling, treatment, and storage of hazardous waste from the project.

EC-1a Medium Potential Impact Sites. SFPP shall thoroughly review current agency (e.g., Department of Toxic Substances Control [DTSC], Regional Water Quality Control Board, the appropriate County's Environmental Health Division or Fire Department) records for "medium" potential sites (as defined in Tables D.6-1 through D.6-7) followed by site-

[1] Sites with high and medium potential to affect the construction ROW are identified in Section D.6.3.6.

specific visual inspection of the pipeline route by a qualified environmental consultant approved by the CSLC. Record review shall identify data confirming that no off-site contamination extends to the pipeline route, or that adequate remediation of the pipeline route has occurred, or agency certified closure of the site. Visual inspection shall be completed for the unpaved portions of the route and shall verify no evidence of off-site discharge, surface stains or unauthorized dumping.

If results of the record review or visual inspection indicate that contamination is present in the pipeline route, medium potential sites shall be treated as high potential and the requirements of EC-1b shall be implemented. Record review of these potential sites must determine that the horizontal limits of soil or groundwater contamination do not extend near the proposed trench area. Where the limits of contamination are uncertain, a soil vapor survey, soil sampling, and/or groundwater sampling shall be conducted along the affected length of the proposed trench. Laboratory test results from these site investigations shall be reported to DTSC or the appropriate County's Environmental Health Division and shall include an assessment of the contamination potential in the trench area. Documentation of all site research and a copy of the DTSC or the appropriate County's Environmental Health Division approval letter must be provided to the CSLC 60 days prior to start of construction.

EC-1b High Potential Impact Sites. SFPP shall review current agency (e.g., Department of Toxic Substances Control [DTSC], Regional Water Quality Control Board, the appropriate County's Environmental Health Division or Fire Department) records of "high" potential sites (as defined in Tables D.6-1 through D.6-7) to design an investigation program to assess whether there is contamination in surface waste or debris and underlying soil and shallow groundwater. The review shall be performed by a qualified environmental consultant approved by the CSLC. If record review demonstrates that contamination from "high" sites does not extend off-site, or if remediation has been completed, and/or the agency has issued a case-closed status, the site may be downgraded to a "low" potential site and no further action is required.

If the records review does not eliminate the possibility that contamination could extend off-site, an investigation shall be performed. The investigation shall include collecting samples for laboratory analysis and quantification of contaminant levels within the proposed excavation and surface disturbance areas. Subsurface investigation for high potential sites shall determine appropriate worker protection and hazardous material handling and disposal procedures appropriate for the subject site. Areas with contaminated soil and groundwater determined to be hazardous waste shall be removed by personnel who have been trained through the OSHA recommended 40-hour safety program (29CFR1910.120) with an approved plan for groundwater extractions, soil excavation, control of contaminant releases to the air, and off-site transport or on-site treatment. Health and safety plans, prepared by a qualified and approved industrial hygienist, shall be developed to protect the general public and all workers in the construction area. Results shall be reviewed and approved by the appropriate County's Environmental Health Division or DTSC prior to construction. Documentation of all site research and a copy of the DTSC or appropriate County's Environmental Health Division approval letter must be provided to the CSLC 60 days prior to start of construction.

EC-1c Unknown Soil or Groundwater Contamination. During all project excavation activities, the contractor shall inspect the exposed soil for visual evidence of contamination. If visual

contamination indicators are observed during excavation or grading activities, all work shall stop and an investigation shall be designed and performed to verify the presence and extent of contamination at the site. A qualified and approved environmental consultant shall perform the review and investigation. Results shall be reviewed and approved by the appropriate County's Environmental Health Division or DTSC prior to construction. The investigation shall include collecting samples for laboratory analysis and quantification of contaminant levels within the proposed excavation and surface disturbance areas. Subsurface investigation shall determine appropriate worker protection and hazardous material handling and disposal procedures appropriate for the subject site. Areas with contaminated soil and groundwater determined to be hazardous waste shall be removed by personnel who have been trained through the OSHA recommended 40-hour safety program (29CFR1910.120) with an approved plan for groundwater extractions, soil excavation, control of contaminant releases to the air, and off-site transport or on-site treatment. A health and safety plan, prepared by a qualified and approved industrial hygienist, shall be used to protect the general public and all workers in the construction area.

Residual Impact. With implementation of Mitigation Measures EC-1a, EC-1b, and EC-1c, impacts from contaminated sites along the construction ROW would be less than significant.

Voluntary cleanup by SFPP of contaminated soil encountered by the Proposed Project would be a beneficial (Class IV) impact, because the project area would have less contamination after project construction was complete.

Impact EC-2: Landfills Near ROW

The presence of landfills near the proposed pipeline alignment could result in encountering methane or other flammable or toxic gases during construction. (Potentially Significant, Class II)

Impact Discussion

Contamination associated with landfills (two such sites are identified in Tables D.6-1 through D.6-7) could affect the pipeline construction zone, releasing methane, other flammable gases, and volatile organic compounds into excavated trenches and other areas of the active construction zone. The release of such gases could cause an explosion or fire hazard and/or potential health hazards.

Mitigation Measure for Impact EC-2: Landfills Near ROW

EC-2a Landfill Gases. To assess the possibility that contamination from identified landfills (as shown in Tables D.6-1 through D.6-7) could affect the pipeline construction zone, DTSC and appropriate County Environmental Health Division record searches shall be completed to determine whether contamination could extend into the proposed trench. If records cannot confirm a gas-free landfill perimeter adjacent to the project, a soil vapor survey consisting of driving probes every 25 to 50 feet along the affected trench line shall be conducted. Vapor samples shall be tested for methane, other flammable gases, and volatile organic compounds. Laboratory test results shall be reported to DTSC or the appropriate County Environmental Health Division and shall include an assessment of the contamination potential in the trench area. Documentation of all site research and a copy of the DTSC or appropriate County's Environmental Health Division approval letter shall be provided to the CSLC prior to start of construction.

Residual Impact. With implementation of Mitigation Measure EC-2a, impacts from encountering landfill gases during pipeline construction would be less than significant.

Impact EC-3: Construction Near Natural Gas Wells

Construction activities associated with the Proposed Project could result in the release of natural gas from existing gas wells, causing an explosion or fire hazard and/or potential health hazards. (Potentially Significant, Class II)

Impact Discussion

There are numerous small active and abandoned natural gas fields in the vicinity of portions of the proposed pipeline route. Construction activities associated with the Proposed Project that result in ground disturbances could interfere with existing abandoned or inactive gas wells and cause release of natural gas that could result in an explosion or fire hazard and/or potential health hazards to the construction workers and other people in the vicinity of the active construction zone.

Mitigation Measure for Impact EC-3: Construction Near Natural Gas Wells

EC-3a Abandoned Natural Gas Wells. Prior to trench excavation and pipeline construction, the Applicant shall contact the California Department of Conservation, Division of Oil, Gas and Geothermal Resources for specific information on wells located in or near the pipeline route, including location and abandonment details. The Applicant shall make a diligent effort to avoid construction near abandoned natural gas wells. If the pipeline is located over or near (i.e., within 50 feet of the pipeline route) a plugged or abandoned well, or if an unrecorded well is encountered during construction, the Applicant shall coordinate with the Division of Oil, Gas and Geothermal Resources to ensure that the well is flagged for avoidance or is correctly abandoned.

Residual Impact. With implementation of Mitigation Measure EC-3a, impacts from abandoned natural gas wells along the construction ROW would be less than significant.

Impact EC-4: Transport and Disposal of Hazardous Soils

Cleanup of hazardous materials along the pipeline ROW would require transport and disposal of these materials. (Less than Significant, Class III)

Impact Discussion

If hazardous materials are encountered during construction, contaminated soils will be removed and transported to appropriate disposal sites (as required by Mitigation Measure EC-1b). The means of transport of these materials is governed by regulation, and the volume of material to be disposed of is not anticipated to exceed the capacity of waste treatment and disposal sites. The impact is expected to be less than significant (Class III).

Mitigation Measure: None required.

Residual Impact: The impact would be less than significant, and no mitigation is required.

D.6.3.4 Impacts of Pipeline Accidents

Impact EC-5: Soil and Groundwater Contamination Resulting from a Pipeline Accident

Pipeline accidents could result in small to very large spills of refined petroleum products that would cause soil and potential groundwater contamination. (Potentially Significant, Class II)

Impact Discussion

Pipeline accidents could result in spills of refined petroleum products ranging from small (less than one barrel) to very large (over 10,000 barrels) as defined in Section D.2. Refined petroleum products such as gasoline contain numerous regulated hazardous chemicals. Depending on the location of a pipeline spill and the rate of the leak, the petroleum product would cause soil and/or groundwater contamination. Spills or leaks near surface water would have the least impact on soil and groundwater, as the product that reaches the waterbody will float. Conversely, a slow undetected leak could cause widespread and potential deep percolation of the petroleum. Regardless, the impact of soil and groundwater contamination by a refined petroleum product is potentially significant (Class II), but mitigable to less than significant levels.

In the event of a spill, Mitigation Measure EC-5a shall be implemented to define the affected area and ensure appropriate cleanup of soil and groundwater.

Mitigation Measure for Impact EC-5: Soil and Groundwater Contamination Resulting from a Pipeline Accident

EC-5a Site Characterization After Accident. After a pipeline spill or leak has occurred, a site characterization shall be completed by SFPP to determine the lateral and vertical limits of contamination, concentration of contaminates in the soil or groundwater, and potential risk to the environment. Site characterization shall follow a workplan submitted to and approved by the local agency, the DTSC or RWQCB. Findings and recommendations for remedial action shall be presented to the oversight agency before proceeding with remediation.

Residual Impact. With implementation of Mitigation Measure EC-5a, impacts from soil and groundwater contamination resulting from a pipeline accident would be less than significant.

D.6.3.5 Impacts of Pipeline Operation

Impact EC-6: Environmental Contamination Resulting from Pigging Waste

Spills of pigging waste could cause soil contamination at the pig receiver. (Potentially Significant, Class II)

Impact Discussion

Potential environmental contamination resulting from pipeline operation consists of pipeline cleaning by pigging. Spills of pigging waste could cause soil and/or contamination at the pig receiver and result in a potentially significant (Class II) impact.

Mitigation Measures for Impact EC-6: Environmental Contamination Resulting from Pigging Waste

Mitigation Measure EC-5a (see Section D.6.3.4) should be implemented in this event. An additional adverse (Class III) impact could result if future remediation efforts near the pipeline were limited by the presence of an operational pipeline.

Residual Impact: The residual impact of such an operational accident would be less than significant, assuming implementation of Mitigation Measure EC-5a.

D.6.3.6 Impacts by Segment

This section addresses specific impacts for each project segment, and indicates which of the mitigation measures (defined above) would apply.

Segment 1 (MP 0–6.1) – Contra Costa County and Carquinez Strait

Portions of Segment 1 pass through areas of industrial use and oil refining, storage, and distribution facilities with listed hazardous material contamination sites. Based on the information in the URS reports (URS, 2002a and 2002d), there are five sites with high potential and one site with medium potential to impact the proposed pipeline in Segment 1, as shown in Table D.6-1. The presence of these known contaminated sites and the potential for unknown contamination in an industrial area results in a potential for contaminated soil and/or groundwater to be encountered during construction (Impact EC-1), resulting in a potentially significant (Class II) impact. Mitigation Measures EC-1a and EC-1b are proposed for the two ranks of sites (medium and high, respectively) with potential to impact the project. These measures present procedures for evaluating and constructing through sites with medium and high impact potential. Mitigation Measure EC-1c should also be implemented if necessary; it was developed to deal with the potential impact from previously unknown contamination that may be encountered during construction.

One closed landfill site is located near the proposed pipeline alignment and has the potential to impact the project from methane or other flammable gases produced by the decaying trash, resulting in a potentially significant (Class II) impact (Impact EC-2), mitigable through implementation of Mitigation Measure EC-2a.

Two potentially contaminated sites not listed in the Applicant's database are also present along the alignment, Peyton Slough and the Rhodia Inc. facility (URS, 2002b). Both sites have had known historic heavy metal contamination of the soil and should be treated as sites with a high potential to impact the project. The presence of these contaminated sites results in a potential for contaminated soil and/or groundwater to be encountered during construction, resulting in a potentially significant (Class II) impact (Impact EC-1), mitigable to less than significant levels through implementation of Mitigation Measures EC-1b and EC-1c. If construction of the Proposed Project occurs after remediation of these sites, the record review required by Mitigation Measure EC-1b will result in these sites being reclassified as "low" potential.

Any cleanup of environmental contamination that is accomplished during construction of the pipeline alignment would be considered a beneficial (Class IV) impact. Cleanup of contaminated sites along the pipeline route would also cause a minor adverse impact (Impact EC-4; Class III) by adding to the regional hazardous material transportation and treatment and disposal systems.

After implementation of Mitigation Measures EC-1a, EC-1b, EC-1c, and EC-2a, the residual impact in Segment 1 would be less than significant.

Table D.6-1. Hazardous Waste Sites Potentially Impacting Segment 1

Approx MP	Site Name	Site Address	Database Lists[1]	Comments
HIGH POTENTIAL SITES				
1-2	Acme Fill Composting	950 Waterbird Way, Martinez	SWLF, FINDS, ERNS, RCRIS-Violator, NFRAP, SCL	Active Composting Facility. Case referred to RCRA.
2-3	IT Vine Hill Complex	896 Waterbird Way, Martinez	Toxic Pits, FINDS, RCRIS-Violator, RCRIS-LQG, UST, RCRIS-TSDC	The Toxic Pits database reports 7 spills. No other information was provided.
2-3	Mountain View Sanitary District	3800 Arthur Road, Martinez	LUST, FINDS, UST, CORTESE	Case closed. Gasoline affected other groundwater. Shallow contaminated groundwater may be encountered during trenching.
3-4	Air Products MFG Corp	110 Waterfront Road, Martinez	TRIS, FINDS, RCRIS-SQG	Propylene, n-hexane, copper compounds, and zinc compounds released in unknown quantities.
3-4	Martinez City Rubbish	301 Waterfront Rd, Martinez	SWLF, ERNS, SCL	Closed. Pre-regulatory solid waste disposal site. Site referred to RWQCB. Potentially contaminated shallow groundwater likely encountered during trenching near this site.
MEDIUM POTENTIAL SITES				
3-4	Southern Pacific Pipeline	680 Waterfront Rd, Martinez	ERNS	Unknown quantity of gasoline spilled affecting the Carquinez Strait.

Source: URS Environmental Contamination Assessment and URS Letter Report Rhodia Site Evaluation, Payton Slough Area, Martinez, Ca.
[1] Database List descriptions are from the URS Environmental Database.

Phase 1 Carquinez Strait Crossing

During excavation for the connection to the existing 14-inch pipeline there is a potential to encounter soil and/or groundwater contamination that may have spread from the Rhodia site (URS, 2002b). This would result in a potentially significant impact (Class II), mitigable through implementation of Mitigation Measures EC-1b and EC-1c. After implementation of these mitigation measures, the residual impact would be less than significant.

Phase 2 Carquinez Strait Crossing

Excavation for the Phase 2 Carquinez Strait crossing would likely encounter heavy metal–contaminated soil and/or groundwater in the vicinity of Peyton Slough (depending on the extent and method of remediation now in progress) (URS, 2002b). This would result in a potentially significant impact (Class II), mitigable through implementation of these mitigation measures. After implementation of these mitigation measures, the residual impact would be less than significant.

Segment 2 (MP 6.1–17.6) – Benicia and I-680 Frontage

A portion of Segment 2, in the City of Benicia, passes through industrial areas with listed hazardous material sites. Based on the information in the URS report (URS, 2002d), there are five sites with high potential and two sites with medium potential to impact the proposed pipeline in Segment 2, as shown in Table D.6-2. The presence of these contaminated sites results in a potential for contaminated soil and/or groundwater to be encountered during construction (Impact EC-1), resulting in a potentially significant (Class II) impact, mitigable through implementation of Mitigation Measures EC-1a, EC-1b, and EC-1c.

Table D.6-2. Hazardous Waste Sites Potentially Impacting Segment 2

Approx MP	Site Name	Site Address	Database Lists[1]	Comments
HIGH POTENTIAL SITES				
7-8	GroStrait Products	3855 Sprig Dr, Benicia	SWLF	Active permitted minor waste tire facility.
8-9	Pepsi Cola West	4701 Park Rd, Benicia	LUST, ERNS, UST, CORTESE	Case closed. Diesel affected soil only. Shallow groundwater likely to be encountered during trenching.
8-9	The Customer Company	4457 Park Rd, Benicia	LUST, UST, CORTESE	Case closed. Gasoline affected other ground-water. Shallow groundwater likely to be encountered during trenching.
MEDIUM POTENTIAL SITES				
11	Southern Pacific Pipeline	Goodyear and Morrow	LUST	Preliminary Site Assessment underway. Gasoline leak to other groundwater. Shallow groundwater not expected to be encountered during trenching.

Source: URS Environmental Contamination Assessment.
[1] Database List descriptions are from the URS Environmental Database.

Any cleanup of environmental contamination that is accomplished during construction of the pipeline alignment could be considered as a beneficial (Class IV) impact. Cleanup of contaminated sites along the pipeline route would also cause a minor adverse impact (Impact EC-4; Class III) by adding to the regional hazardous material transportation, treatment, and disposal systems.

After implementation of Mitigation Measures EC-1a, EC-1b, and EC-1c, the residual impact in Segment 2 would be less than significant.

Segment 3 (MP 17.6–24.5) – Cordelia

Near the end of Segment 3, as it crosses the edge of the Suisun City, the alignment will pass adjacent to an industrial area. Based on the information in the URS report (URS, 2002d), there is one site with high potential and one site with medium potential to impact the proposed pipeline in Segment 3, as shown in Table D.6-3. The presence of these contaminated sites results in a potential for contaminated soil and/or groundwater to be encountered during construction (Impact EC-1), resulting in a potentially significant (Class II) impact, mitigable through implementation of Mitigation Measures EC-1a, EC-1b, and EC-1c.

Table D.6-3. Hazardous Waste Sites Potentially Impacting Segment 3

Approx MP	Site Name	Site Address	Database Lists[1]	Comments
HIGH POTENTIAL SITES				
24-24.5	Union Pacific Railroad	301 Springs St, Suisun City	LUST, UST	Case closed. Regional board and local agencies are in concurrence that no further action is necessary. Shallow groundwater likely to be encountered during trenching.
MEDIUM POTENTIAL SITES				
24-24.5	Sheldon Oil Co.	426 Main St, Suisun City	LUST, FINDS, UST, RCRIS-SQG, CORTESE	Leak being confirmed. Miscellaneous motor vehicle fuels leaking to soil.

Source: URS Environmental Contamination Assessment.
[1] Database List descriptions are from the URS Environmental Database.

Any cleanup of environmental contamination that is accomplished during construction of the pipeline alignment could be considered as a beneficial (Class IV) impact. Cleanup of contaminated sites along the pipeline route would also cause a minor adverse impact (Impact EC-4; Class III) by adding to the regional hazardous material transportation, treatment, and disposal systems.

After implementation of Mitigation Measures EC-1b and EC-1c, the residual impacts in Segment 3 would be less than significant.

Cordelia Mitigation Segment

This mitigation segment was developed to avoid sensitive biological and water resources within Cordelia Marsh and Slough. The 2.6-mile segment diverges from the proposed route at MP 17.6 and rejoins the proposed route at approximately MP 20.0. The Cordelia Mitigation Segment parallels Ramsey Road until Cordelia Road, where it continues along Cordelia Road to the UPRR ROW where it rejoins the proposed route (see Figure D.4-3).

No known contaminated medium or high potential impact sites have been identified along the proposed route segment that would be avoided by the Cordelia Mitigation Segment. Because construction work associated with the Cordelia Mitigation Segment would be immediately adjacent to or within existing road ROWs, there is a higher potential that during construction of this segment, construction could encounter unanticipated soil and/or groundwater contamination. These impacts would be reduced to less than significant levels (Class II) through implementation of Mitigation Measure EC-1c. The proposed route segment is preferred over the Cordelia Mitigation Segment because of the reduced likelihood of existing contamination.

Segment 4 (MP 24.5–30.7) – Fairfield/Suisun City

In the Cities of Fairfield and Suisun the pipeline alignment would pass through and near commercial and light industrial areas, approximately between MP 24.5 and 25, and industrial and minor agricultural areas, approximately between MP 28 and 30, with listed hazardous material sites. Based on the information in the URS report (URS, 2002d), there are six sites with high potential and five sites with medium potential to impact the proposed pipeline in Segment 2, as shown in Table D.6-4. The presence of these contaminated sites along and near the pipeline alignment results in a potential for contaminated soil and/or groundwater to be encountered during construction (Impact EC-1). This results in a potentially significant (Class II) impact, mitigable through implementation of Mitigation Measures EC-1a, EC-1b, and EC-1c.

Any cleanup of environmental contamination that is accomplished during construction of the pipeline alignment could be considered as a beneficial (Class IV) impact. Cleanup of contaminated sites along the pipeline route would also cause a minor adverse impact (Impact EC-4; Class III) by adding to the regional hazardous material transportation, treatment, and disposal systems.

After implementation of Mitigation Measures EC-1a, EC-1b, and EC-1c, the residual impacts would be less than significant.

Table D.6-4. Hazardous Waste Sites Potentially Impacting Segment 4

Approx MP	Site Name	Site Address	Database Lists[1]	Comments
HIGH POTENTIAL SITES				
24.5-25	City of Suisun Redevelopment	209 Main St, Suisun City	LUST, UST	Case closed. Gasoline affected other groundwater. Shallow Groundwater likely to be encountered during trenching.
24.5-25	Solano County Service Station	447 Washington, Fairfield	LUST, CORTESE	Preliminary site assessment underway. Gasoline leaking into other groundwater. Shallow groundwater likely to be encountered during trenching.
24.5-25	Union Food and Liquor	400 Union St, Fairfield	LUST, UST	Case closed. Gasoline leaking into undefined media. Shallow Groundwater likely to be encountered during trenching.
24.5-25	Ken Hagemann Personal Garage	730A Broadway St, Fairfield	LUST	Case closed. Gasoline leaking to other groundwater. Shallow groundwater likely to be encountered during excavation.
28-29	Food & Liquor	2301 Walters Rd, Fairfield	LUST, UST, CORTESE	Preliminary site assessment. Workplan submitted. Gasoline affected groundwater likely to be encountered during trenching.
28-29	Robbins & Myers Inc.	2100 Huntington Dr, Fairfield	SPILLS, TRIS, FINDS, RCRIS-Violator, NFRAP, UST	Site has had numerous RCRA violations reported for unreported reasons. Numerous USTs were reported as registered and the State spills database reports the facility as inactive with undetermined case type.
MEDIUM POTENTIAL SITES				
24.5-25	Amour	748 N. Texas St, Fairfield	LUST, UST, CORTESE	Case closed. Miscellaneous motor vehicle fuels leak to soil only.
28.5-29	American National Can Company	2433 Crocker Circle, Fairfield	TRIS, FINDS, RCRIS-Violator, RCRIS-SQG	Unknown quantities of glycol ethers, N-butyl alcohol, manganese, and hydrogen fluoride released into unknown media.
28.5-29	Ashland Chemical Inc.	2461 Crocker Circle, Fairfield	TRIS, AST, FINDS, RCRIS-SQG	Unknown quantities of numerous organic chemicals released into unknown media.
29-30	Owens Plastics	2500 Huntington Dr, Fairfield	LUST, FINDS, UST, CORTESE, RCRIS-SQG	Pollution characterization underway. Motor vehicle fuel leak to soil only.
29-30	Clorox Company	2600 Huntington Dr, Fairfield	ERNS, TRIS, INDS, RCRIS-LQG	2000 gallons of caustic soda solution spilled into sewer. Unknown quantities of chlorine and glycol ethers spilled.

Source: URS Environmental Contamination Assessment.
[1] Database List descriptions are from the URS Environmental Database.

Segment 5 (MP 30.7–65.1) – Solano and Yolo Counties Agricultural Area

Based on the information in the URS report (URS, 2002d), there is one site with high potential and one site with medium potential to impact the proposed pipeline in Segment 5, as shown in Table D.6-5. The presence of these contaminated sites results in a potential for contaminated soil and/or groundwater to be encountered during construction (Impact EC-1), resulting in a potentially significant (Class II) impact, mitigable through implementation of Mitigation Measures EC-1a, EC-1b, and EC-1c. The high potential site is an active landfill located adjacent to the proposed pipeline alignment and has an additional potential impact to the project from methane or other toxic or flammable gases, resulting in a potentially significant (Class II) impact, mitigable through implementation of Mitigation Measure EC-2a.

Any cleanup of environmental contamination that is accomplished during construction of the pipeline alignment could be considered as a beneficial (Class IV) impact. Cleanup of contaminated sites along the pipeline route would also cause a minor adverse impact (Impact EC-4; Class III) by adding to the regional hazardous material transportation, treatment, and disposal systems.

There are numerous small active and abandoned gas fields in the vicinity of this segment. This results in a potential for pipeline construction to interfere with abandoned or inactive wells (Impact EC-3), resulting in a potentially significant (Class II) impact. This impact would be mitigated to less than significant levels by implementation of Mitigation Measure EC-3a.

After implementation of Mitigation Measures EC-1a, EC-1b, EC-1c, and EC-3a, the residual impacts in Segment 5 would be less than significant.

Table D.6-5. Hazardous Waste Sites Potentially Impacting Segment 5

Approx MP	Site Name	Site Address	Database Lists[1]	Comments
HIGH POTENTIAL SITES				
39-40	B&J Landfill	6426 Hay Rd, Vacaville	SWLF, FINDS, AST	Active permitted solid waste landfill.
MEDIUM POTENTIAL SITES				
35-36	Nike Battery 10	5887 Lewis and Hay Rd, Elmira	LUST, CORTESE	Leak being confirmed. Diesel fuel affecting drinking water aquifer. Shallow groundwater no likely to be encountered during trenching.

Source: URS Environmental Contamination Assessment.
[1] Database List descriptions are from the URS Environmental Database.

Segment 6 (MP 65.1–69.9) – West Sacramento

Most of Segment 6 passes through industrial, shipping and transportation, and oil refining and distribution areas, with many listed hazardous material–contaminated sites. Based on the information in the URS report (URS, 2002d), there are seven sites with high potential and nine sites with medium potential to impact the proposed pipeline in Segment 6, as shown in Table D.6-6. The presence of these known contaminated sites and the potential for unknown contamination in an industrial area results in a potential for contaminated soil and/or groundwater to be encountered during construction (Impact EC-1), resulting in a potentially significant (Class II) impact. This impact would be mitigated by implementation of Mitigation Measures EC-1a, EC-1b, and EC-1c.

Any cleanup of environmental contamination that is accomplished during construction of the pipeline alignment could be considered as a beneficial (Class IV) impact. Cleanup of contaminated sites along the pipeline route would also cause a minor adverse impact (Impact EC-4; Class III) by adding to the regional hazardous material transportation, treatment, and disposal systems.

After implementation of Mitigation Measures EC-1a, EC-1b, and EC-1c, the residual impacts would be less than significant.

Segment 7 – Wickland Connection

Most of the Wickland Connection alignment traverses through an industrial area. Based on the information in the URS reports (URS, 2002e), there are four sites with high potential and two sites with medium potential to impact the proposed pipeline at the Wickland Connection, as shown in Table D.6-7. The leaking underground fuel tanks have or likely have impacted the shallow groundwater. Due to the proximity of these sites

Table D.6-6. Hazardous Waste Sites Potentially Impacting Segment 6

Approx MP	Site Name	Site Address	Database Lists[1]	Comments
HIGH POTENTIAL SITES				
65.5	Intercal Real Estate	4891 West Capitol Ave, West Sacramento	LUST	Leak being confirmed. Gasoline affecting drinking water aquifer. Shallow groundwater likely to be expected during trenching.
65.5	Unocal #5695	4825 West Capitol Ave, West Sacramento	LUST, CORTESE	Case closed. Gasoline leak into drinking water aquifer. Shallow groundwater likely to be encountered during trenching.
65.5	Chevron #9-6726	4800 West Capitol Ave, West Sacramento	LUST, UST	Leak being confirmed. Waste oil affecting drinking water aquifer. Shallow groundwater likely to be encounter during trenching.
66	North American Food Distribution	3969 Industrial Blvd, West Sacramento	LUST, UST	Case closed. Diesel affected soil only. Shallow groundwater likely to be encountered during trenching.
66-66.5	Montgomery Wards	3689 Industrial Blvd, West Sacramento	LUST	Case closed. Diesel affected soil only. Shallow groundwater likely to be encountered during trenching.
67-67.5	Farmers Rice Cooperative	2224 Industrial Blvd, West Sacramento	LUST, TRIS, FINDS, CORTESE	Case closed. Gasoline affected soil only. Shallow groundwater likely to be encountered during trenching.
67.5-68.5	Port of Sacramento	2895 Industrial Blvd, West Sacramento	LUST, ERNS, CORTESE	Leak being confirmed. Diesel fuel released to undefined media. Shallow groundwater likely to be encountered during trenching.
68-68.5	Nor-Cal Beverage Company	2286 Stone Blvd, West Sacramento	LUST, FINDS, UST	Leak being confirmed. Gasoline affecting drinking water aquifer. Shallow groundwater likely to be expected during trenching.
MEDIUM POTENTIAL SITES				
69-69.5	Clark's Trucking	2000 South River Rd, West Sacramento	LUST, SCL	Case closed. Diesel affected soil only. Shallow groundwater not expected.
69-69.5	Wastewater Treatment Plant	1991 South River Rd, West Sacramento	LUST	Leak being confirmed. Diesel affecting soil only. Shallow groundwater not expected.
69-69.5	Corporation Yard	1951 South River Rd, West Sacramento	LUST	Case closed. Gasoline affected soil only. Shallow groundwater not expected.
69.5-70	Beneto Inc.	1875 South River Rd, West Sacramento	LUST	Case closed. Gasoline affected drinking water aquifer. Shallow groundwater not expected.
69.5-70	Greyhound Lines	1874 South River Rd, West Sacramento	LUST, UST, ERNS, CORTESE	Preliminary site assessment underway. Diesel affecting drinking water aquifer. Shallow groundwater not expected.
69.5-70	Redwood Oil Bulk Plant	1800 South River Rd, West Sacramento	LUST, CORTESE	Leak being confirmed. Gasoline affecting soil only. Shallow groundwater not expected.
69.5-70	Rollins Leasing	1781 South River Rd, West Sacramento	LUST, FINDS, RCRIS-SQG, UST	Case closed. Diesel affected soil only. Shallow groundwater not expected.
69.5-70	Tesoro Petroleum	1700 South River Rd, West Sacramento	LUST, UST, FINDS, CORTESE, SPILLS, RCRIS-LQG	Preliminary site assessment underway. Diesel affecting drinking water aquifer. Shallow groundwater not expected.
69.5-70	Seven Eleven	1552 Jefferson Blvd, West Sacramento	LUST, UST	Leak being confirmed. Gasoline affecting drinking water aquifer. Shallow groundwater not expected.

Source: URS Environmental Contamination Assessment.
[1] Database List descriptions are from the URS Environmental Database.

to the Wickland Connection pipeline route, there exists the potential that migration of gasoline, diesel, and MTBE could result in contaminated soil and/or groundwater that may be encountered during construction (Impact EC-1). This is a potentially significant (Class II) impact. Implementation of Mitigation Measures EC-1a, EC-1b, and EC-1c would reduce the impact from these sites to less than significant levels.

Any cleanup of environmental contamination that is accomplished during construction of the pipeline alignment could be considered as a beneficial (Class IV) impact. Cleanup of contaminated sites along the pipeline route would also cause a minor adverse impact (Impact EC-4; Class III) by adding to the regional hazardous material transportation, treatment, and disposal systems.

D.6.3.7 Impacts of Proposed Station Changes

Neither the Concord nor the Sacramento Stations are recorded as having existing contamination present. However, due to their long-term use for petroleum product storage and/or transfer, construction related to the proposed station changes may encounter previously unrecorded contaminated soil in excavations for the new pipeline and structure foundations.

Concord Station. Construction of the new 20-inch-diameter tank suction lines, surge tank, and pig launcher may encounter petroleum-contaminated soil (Impact EC-1) within the existing Concord Station, even though soil and groundwater contamination are not known to exist at this site. Excavation, handling, storage, and disposal of contaminated soil is a potentially significant (Class II) impact. After implementation of Mitigation Measure EC-1c for unknown contamination, the residual impact would be less than significant.

Table D.6-7. Hazardous Waste Sites Potentially Impacting Wickland Connection

Approx MP	Site Name	Site Address	Database Lists[1]	Comments
HIGH POTENTIAL SITES				
65.7	Chevron Station #9-6726	4800 W. Capitol Ave, West Sacramento	LUST, HMIRS, UST, HIST-UST, HAZNET	Release of waste oil affecting groundwater. RWQCB Region 5: Status is leak being confirmed.
65.7	Exxon Truck Stop	4790 W. Capitol Ave, West Sacramento	LUST, ERNS, HMIRS, CHMIRS, UST, HAZNET	Release of gasoline affecting groundwater. RWQCB Region 5: Status is pollution characterization.
65.6	Intercal Real Estate	4891 W. Capitol Ave, West Sacramento	LUST	Release of gasoline affecting groundwater. RWQCB Region 5: Status is leak being confirmed.
65.7	Unocal Service Station # 5695	4825 W. Capitol Ave, West Sacramento	LUST, HIST-UST	Release of gasoline affecting groundwater. MTBE detected. No remediation plan or remediation reported for this site. RWQCB Region 5: Status is case closed.
MEDIUM POTENTIAL SITES				
65.9	Continental Heller Warehouse Yard	4521 W. Capitol Ave, West Sacramento	LUST, HIST-UST, HAZNET	Release of diesel fuel affecting groundwater. MTBE detected. RWQCB Region 5: Status is case closed.
65.8	Arcada Garbage Company	Approx 4800 W. Capitol Ave, West Sacramento	WMUDS, SWAT	Reported as solid waste landfill, Class III – Non-hazardous. Likely a transfer station.

Source: URS Environmental Information Report Wickland Lateral, October 18, 2002.
[1] Database List descriptions are from the URS Environmental Database.

Sacramento Station. Construction of the new pig receiver may encounter petroleum-contaminated soil within the existing Sacramento Station, although there is no recorded contamination at this site. Excavation, handling, storage, and disposal of contaminated soil (Impact EC-1) is a potentially significant (Class II) impact. After implementation of Mitigation Measure EC-1c for unknown contamination, the residual impact would be less than significant.

D.6.3.8 Cumulative Impacts

Potential cumulative impacts related to environmental contamination include one cumulative project in Contra Costa County, two projects in Solano County and three in Yolo County. Refinery upgrades at the Clean Fuels Project (Site #1), Phase Two in Concord, Contra Costa County, may encounter contaminated soil at the existing petroleum facility. Transport and treatment of these materials at off-site facilities that are also needed by the Proposed Project may result in a cumulative impact.

In Solano County, SFPP would be required to make any necessary modifications of the existing Park Road Sewer Lift Station (Site #12). If the modifications include a deeper pipeline excavation, it is likely the Proposed Project would encounter shallow groundwater and potentially contaminated soil or groundwater in this industrial area. The Sheldon Oil Company (Site #40) is constructing a waste processing facility immediately adjacent to the Proposed Project. Although the type of waste that would be processed at the new facility is uncertain, there may be a beneficial impact if project related contaminated soil could be transported to this facility for treatment or disposal.

In Yolo County, interchange bridge improvements (Site #62) could encounter and clean up contaminated soil and groundwater from nearby leaking fuel tanks resulting a beneficial impact for both the Proposed Project and the Wickland Connection. Also, two new water pipeline (Site #7) and sewer pipeline (Site # 72) projects will likely require deep excavation for these large diameter pipelines (30 to 54-inch diameter) in the industrial land use area of West Sacramento. Where these projects encounter unknown contaminated soil or groundwater near the Proposed Project, this information could provide a preview of the local subsurface and environmental conditions.

D.6.4 Environmental Impacts and Mitigation Measures for Existing Pipeline ROW Alternative

Environmental contamination along the existing pipeline ROW may exist where the route passes through industrial areas, petroleum refining, storage, and distribution facilities, and near two federal and State Superfund Sites (URS, 2002c). In addition, leaks from operation of the existing pipeline for over 36 years have resulted in soil and groundwater contamination directly adjacent to the existing pipeline. A summary of available information for pipeline leaks along the existing Line Section 25 pipeline for the past 14 years is summarized in Table D.6-8. Consequently, the potential for construction of the Existing Pipeline ROW Alternative within contaminated materials (Impact EC-1) is very likely, resulting in a potentially significant (Class II) impact. After implementation of Mitigation Measures EC-1b and EC-1c, the residual impact would be less than significant.

Like the proposed pipeline, the Existing Pipeline ROW Alternative would pass across or through two potentially contaminated sites prior to crossing the Carquinez Strait, Peyton Slough, and Rhodia, Inc. Both sites have had known historic heavy metal contamination of the soil and should be treated as sites with a high potential for impact. The presence of these contaminated sites results in a potential for contaminated soil and/or groundwater to be encountered during construction (Impact EC-1), resulting in a significant (Class II) impact. After implementation of Mitigation Measures EC-1b and EC-1c, the residual impact would be less than significant.

Two Superfund sites could impact the Existing Pipeline ROW Alternative (Impact EC-1). The first site is the Laboratory for Energy-Related Health Research/Old Campus Landfill and is located just north of South Fork Putah Creek along Old Davis Road in Davis. This site is about 500 feet from the existing UPRR ROW and is known to have solvent-, chemical waste–, and radioactive waste–contaminated soil and groundwater, representing a potentially significant (Class II) impact. Frontier Fertilizer, also in Davis, is a 13-acre site located just north of I-80 where Road 32A crosses Mace Boulevard. This facility is located less than 300 feet from the Existing Pipeline Alignment and, due to the presence of numerous pesticides in soil and groundwater, represents a potentially significant impact (Class II). The proximity of these two Superfund sites to the Existing Pipeline ROW Alternative will require mitigation for contaminated materials in the pipeline construction area. After implementation of Mitigation Measures EC-1b for high potential sites, the residual impact would be less than significant.

With respect to environmental contamination, most segments of the proposed pipeline alignment and the Existing Pipeline ROW Alternative have a comparable potential to be impacted by the presence of contaminated soil. Spills and leaks along the existing pipeline near Elmira and the existing pipeline route through commercial areas of Davis represent a slightly greater potential for impacts from contaminated soil (Impact EC-1) than the proposed route, which travels through agricultural areas and past two landfills. Therefore, the proposed route is marginally preferred to the Existing Pipeline ROW Alternative.

Mitigation Segment EP-1

Impacts along Mitigation Segment EP-1 would be the same as those along the corresponding portion of the Proposed Pipeline that this route parallels. This would consist of a potential for contaminated soil and/or groundwater from industrial as well as agricultural sources, resulting in a potentially significant impact (Class II). After implementation of Mitigation Measures EC-1a, EC-1b, and EC-1c, the residual impact would be less than significant.

The EP-1 segment would cross undeveloped range land and agricultural areas. The original route of the Existing Pipeline ROW Alternative would cross the slough and marsh lands, which have no known pipeline spills or leaks. Since neither area has known contamination, Mitigation Segment EP-1 is similar to the original alternative route in terms of contamination.

Mitigation Segment EP-2

Mitigation Segment EP-2 would allow avoidance of potential soil contamination from commercial facilities, such as leaking underground storage tanks in Davis and one Superfund Site (Energy-Related Health Research/Old Campus Landfill). Therefore, Mitigation Segment EP-2 is preferred over the Existing Pipeline ROW Alternative route.

D.6.5 Environmental Impacts of the No Project Alternative

There are no major new pipeline construction components of the No Project Alternative, but rather upgrades to existing pipelines and construction of booster pump stations, plus increased use of tanker trucks and trains. Pipeline upgrades include up to 6 miles of new pipeline along LS 25 that would most likely be constructed in areas that are at high risk for encountering contamination (Impact EC-1). These areas are most likely to be where there have been historic leaks of petroleum products, as well as the existing levels of other contamination. In addition, if the Proposed Project were not constructed, the beneficial impact of cleanup of contaminated sites would not occur.

Table D.6-8. Summary of Pipeline Spills and Environmental Contamination, Existing Pipeline ROW Alternative

Site Name	Location	Cause of Release Discovery Source & Date	Contamination Summary
Mococo I Site	Adjacent to marsh area N of Marina Vista Blvd, Martinez	Release identified by SFPP personnel. July 13, 1989	Both soil and water in marsh affected. Contaminated soil was excavated and contaminated water treated with oil/water separator and carbon treatment system. Marsh Restoration Plan prepared in November 1989 to address impact of spill. Spill volume estimated at 10 to 20 barrels of gasoline with some diesel.
Mococo II Site	In ponded area of marsh near Mococo Rd, Martinez; approx 200 ft E of Mococo I Site	Release identified by Shell Oil personnel reporting gasoline odor. January 23, 1990	Both soil and water affected. Marsh Restoration Plan of November 1989 updated to address this leak. Spill volume estimated at 10 to 20 barrels of diesel and gasoline.
Yolo Bypass Leak Site	Approx 80 ft N of SPRR tracks and 1/2 mile NNW of West Sacramento	Approx 500 feet of pipeline damaged by bulldozer with ripper blade. Loss of pipeline pressure noted by SFPP personnel; upstream block valve immediately shut down. April 21, 1990	Gasoline flowed into a dry agricultural ditch for approx 1,200 feet. Remediation included excavation of contaminated soil and extraction of free product. SFPP estimated leak volume approx 2,251 barrels.
Fox Road Remediation Site	Adjacent to UPRR tracks approx 3 miles NE of Elmira	November 1993	Site cleanup included excavation of contaminated soil, extraction of free product, and installation and operation of groundwater extraction and treatment facilities. Approx 31,500 gallons of product recovered during initial extraction, 11/93–12/93. Spill volume not known.
Waterfront Road Release Site	Approx 1/2 mile W of Pacheco Slough, Martinez	Petroleum reported on water surface at site by Tosco Refinery personnel. Small pinhole leak discovered in pipeline. January 25, 1994	Leak affected soil and groundwater in vicinity of leak, and spread to surface water. Volume of spill not known.
Peabody Road Release Site	Near Union Pacific rail line SW of Peabody Rd, Fairfield	Leak was detected by hydrocarbon odors noted in vicinity of pipeline. May 13, 1994	Leak affected soil and groundwater. No information on pipeline damage or volume of leak.
A Street Remediation Project	Adjacent to UPRR tracks and just W of 'A' Street in Elmira	Leak caused by 3/4-inch hairline crack. September 1996	Contamination spread along the trench backfill materials. Contaminated soil removed, extraction wells installed to remove contamination from City utility trenches. Volume of leak not known.
Elmira Booster Station	Near Leisure Town Rd and UPRR tracks, 2 miles SW of Elmira	Hydrocarbon release from pressure valve resulted in a small area of visible surface soil staining. February 2000 and December 2000	Soil removed to a depth of approx 4 inches. Soil and groundwater sampling revealed minor to moderate soil and groundwater contamination in the immediate vicinity.
East Yolo Causeway Site	Approx 2 miles SW of Yolo Bypass, adjacent to UPRR track levee, West Sacramento	Release identified from soil staining by UPRR personnel. Small crack in pipe (< 0.25 inches). May 17, 2000	Remediation included free product removal, soil excavation, and surface and groundwater assessment. Volume of spill not known.
Fry & Meridian Road Release	Near intersection of Fry & Meridian Rds, SE of Vacaville	Leak discovered during maintenance activities. May 25, 2000	Contaminated soil excavated; soil testing indicated contamination still existed in the subsurface soils. Remaining contaminated soil was excavated in August 2001. Groundwater sampling indicated that groundwater had been impacted by the release.
Pacheco Creek at Waterfront Road	Approx 1/4 mile W of Pacheco Creek and adjacent to UPRR track, Martinez	Ultramar personnel reported gasoline on ground surface and in water. Pipeline immediately shut down. 3 pinhole leaks discovered. December 12, 2000	Extensive emergency response and remedial activities conducted at site from December 13, 2000 to January 24, 2001. Further remediation has been conducted. Volume of spill not known.

Source: SFPP reports on remediation activities.

Approximately 9 miles of SFPP's LS 9 pipeline could be replaced, including high-risk areas, and new booster pump stations constructed to improve throughput. This pipeline is more than 45 years old and would have equal or greater potential for contamination as the existing pipeline LS 25.

A preliminary environmental assessment would be required to evaluate potential impacts from hazardous waste sites on or adjacent to land that would be used for the new booster pump stations required for the SFPP LS 25 and LS 9 modification. Sites with significant potential to impact the proposed modifications should be identified, agency records reviewed and each site ranked according to potential impact on the project. Since these sites have not been identified and ranked, comparison of the impacts of environmental contamination for the No Project Alternative and the Proposed Project is difficult. However, based on the anticipated amount of ground disturbance (excavation) planned for the construction of two or three pump stations and 16 miles of replacement pipeline, it is reasonable to suggest there would be a smaller potential for environmental contamination impacts than those along the 70.7-mile Proposed Project route. However, the Proposed Project would construct a new pipeline with a lower risk of pipeline leaks. The two existing pipelines would require some repair and upgrades that are likely to be in areas of past leaks and this work will encounter contaminated soil or groundwater (Impact EC-5). While the Applicant would likely employ standard cleanup measures in this situation, it is possible that without additional mitigation, impacts would remain significant (Class I). The existing pipelines are 36 and 45 years old and represent a greater potential for future leaks than a new pipeline. Therefore, overall the Proposed Project is preferred over the No Project Alternative.

D.6.6 Mitigation Monitoring, Compliance, and Reporting Table

Table F-5 (in Section F) presents the mitigation monitoring program for environmental contamination.